

WHAT IS CLAIMED IS

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1. An image processing apparatus comprising:
a code stream generating part converting image
data into two-dimensional wavelet coefficients,
quantizing the same and coding the quantization result
10 so as to compress the image data and generate a code
stream;

an additional information creating part
creating additional information concerning the image
data; and

15 an additional information embedding part
embedding the thus-created additional information into
the code stream as a code in an off-rule zone which is
not decoded by a JPEG 2000 standard rule.

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2. The image processing apparatus as claimed
in claim 1, further comprising:

25 a terminating code providing part forcibly

providing a terminating code at a position before a code length position which is defined by header information, and

wherein:

5 a zone defined from the position at which the terminating code is provided to the code length position is determined as the off-rule zone.

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3. The image processing apparatus as claimed in claim 2, wherein:

15 said terminating code providing part provides the terminating code in a main header area of the code stream.

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4. The image processing apparatus as claimed in claim 3, wherein:

25 said terminating code providing part provides the terminating code before the code length position defined by a PLM marker which describes a main header

packet length.

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5. The image processing apparatus as claimed
in claim 3, wherein:

said terminating code providing part provides
the terminating code before the code length position
10 defined by a TLM marker which describes a main header
tile length.

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6. The image processing apparatus as claimed
in claim 3, wherein:

said terminating code providing part provides
the terminating code before the code length position
20 defined by a PPM marker which collectively describes
main header packet headers.

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7. The image processing apparatus as claimed
in claim 3, wherein:

said terminating code providing part provides
the terminating code before the code length position
5 defined by a COM marker for comments.

10 8. The image processing apparatus as claimed
in claim 2, wherein:

said terminating code providing part provides
the terminating code in an actual code data area of the
code stream.

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9. The image processing apparatus as claimed
20 in claim 8, wherein:

said terminating code providing part provides
the terminating code before the code length position
defined by an SOT marker which is added at the top of a
tile code sequence for starting a tile.

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10. The image processing apparatus as claimed
in claim 8, wherein:

said terminating code providing part provides
the terminating code before the code length position
5 defined by a PLT marker which describes a tile header
packet length.

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11. The image processing apparatus as claimed
in claim 8, wherein:

said terminating code providing part provides
the terminating code before the code length position
15 defined by a PPT marker which collectively describes
tile header packet headers.

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12. The image processing apparatus as claimed
in claim 8, wherein:

said terminating code providing part provides
the terminating code before the code length position
25 defined by a COM marker for comments.

13 The image processing apparatus as claimed
in claim 1 wherein:

said additional information embedding part
regards a zone subsequent to an EOC marker which
5 indicates the end of the code stream as the off-rule zone,
and embeds the additional information therein as a code.

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14. The image processing apparatus as claimed
in claim 1, wherein:

said additional information embedding part
embeds the additional information in a comment space in
15 a COM marker for comments as a code.

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15. The image processing apparatus as claimed
in claim 1, wherein:

said additional information embedding part
embeds the additional information in an off-rule zone in
an off-rule zone of a marker itself other than a COM
25 marker for comments.

16. The image processing apparatus as claimed
in claim 1, wherein:

said additional information creating part
creates, as the additional information, tamper
5 resistance information for the image data.

10 17. The image processing apparatus as claimed
in claim 1, wherein:

said additional information creating part
creates, as the additional information, management
information for the image data

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18. The image processing apparatus as claimed
20 in claim 1, wherein:

said additional information creating part
creates, as the additional information, image position
information concerning image area classification
according to image feature such as edge part, character
25 part, picture part, halftone dot part or so.

19. The image processing apparatus as claimed
in claim 1, wherein:

said additional information creating part
creates, as the additional information, from the image
5 data, other image data having an image quality different
from the original image data.

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20. An image processing apparatus comprising:
an inverse converting part decompressing, into
image data, a code stream generated as a result of
converting image data into two-dimensional wavelet
15 coefficients, quantizing the same and coding the
quantization result; and

an off-rule zone information reading part
reading additional information which is embedded in an
off-rule zone in the code stream as a code, the zone
20 being not decoded according to a JPEG 2000 standard rule.

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21. The image processing apparatus as claimed

in claim 20, wherein:

the additional information is created by the
additional information creating part claimed in claim 1,
and embedded by the additional information embedding
5 claimed in claim 1.

10 22. The image processing apparatus as claimed
in claim 20, further comprising:

an additional information processing part
which performs processing concerning the image data
based on the additional information read by means of
15 said off-rule zone information reading part.

20 23. The image processing apparatus as claimed
in claim 22, wherein:

said additional information processing part
forcibly finishes decoding processing upon detecting
tamper based on a determination on the additional
25 information read in case the additional information

comprises tamper resistance information.

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24. The image processing apparatus as claimed
in claim 22, wherein:

said additional information processing part
generates an alarm upon detecting tamper based on a
10 determination on the additional information read in case
the additional information comprises tamper resistance
information.

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25. The image processing apparatus as claimed
in claim 22, wherein:

said additional information processing part
20 does not output a part having undergone tamper upon
detecting the tamper based on a determination on the
additional information read in case the additional
information comprises tamper resistance information.

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26. The image processing apparatus as claimed
in claim 22, wherein:

said additional information processing part
performs file arrangement concerning the relevant image
5 data in case the additional information comprises
management information for the image data.

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27. The image processing apparatus as claimed
in claim 22, wherein:

said additional information processing part
performs access control for the relevant image data in
15 case the additional information comprises management
information for the image data.

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28. The image processing apparatus as claimed
in claim 22, wherein:

said additional information processing part
performs image processing such as filtering processing
25 or so depending on a respective one of image portions on

the relevant image data in case the additional
information comprises image position information
concerning image area classification according to image
feature such as edge part, character part, picture part,
5 halftone dot part or so.

10 29. The image processing apparatus as claimed
in claim 22, wherein:

 said additional information processing part
outputs image data having an image quality according to
a payment condition in case the additional information
15 comprises image data having an image quality different
from the original image data.

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 30. An image reading apparatus comprising:
a photoelectric device reading an image of an
original;

 an addition determining part selectively
25 determining additional information concerning the image

data read by means of said photoelectric device and whether or not the additional information is to be embedded; and

the image processing apparatus claimed in
5 claim 1 performing image processing including processing of embedding the additional information to the image data read by means of said photoelectric device in case embedding of the additional data is determined by means of said addition determining part.

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31. An image reading apparatus comprising:
15 a photoelectric device reading an image of an original; and

an image processing apparatus claimed in claim
20 performing decompressing, into image data, code data created from converting image data into two-dimensional
20 wavelet coefficients, quantizing the same and coding the quantization result so as to compress the image data.

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32. An image forming apparatus comprising:
the image reading apparatus claimed in claim
30; and

a printer engine forming an image onto a paper
5 based on image data decompressed from code data by a
decompressing part after being read by means of said
image reading apparatus, and being processed by the
image processing apparatus of said image reading
apparatus.

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33. An image forming apparatus comprising:
15 the image reading apparatus claimed in claim
31; and

a printer engine forming an image onto a paper
based on image data decompressed from code data by a
decompressing part after being read by means of said
20 image reading apparatus, and being processed by the
image processing apparatus of said image reading
apparatus.

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34. The image forming apparatus as claimed in
claim 32, further comprising an interface for externally
transmitting the code data obtained from reading image
data by means of said image reading apparatus and then
5 processed by the image processing apparatus

10 35. The image forming apparatus as claimed in
claim 33, further comprising an interface for externally
transmitting the code data obtained from reading image
data by means of said image reading apparatus and then
processed by the image processing apparatus

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36. A program for causing a computer included
20 in the image processing apparatus claimed in claim 1 to
execute each part of said image processing apparatus.

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37. A program for causing a computer included in the image processing apparatus claimed in claim 20 to execute each part of said image processing apparatus.

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38. A computer readable recording medium for storing therein the program claimed in claim 36.

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39. A computer readable recording medium for storing therein the program claimed in claim 37.

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40. An image compressing apparatus producing compressed code data of an image, comprising:

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a part setting image thumbnail information in one or a plurality of forms; and

a part adding the thus-set forms of thumbnail to a header portion of the compressed code data upon

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formation of the code data.

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41. The image compressing apparatus as
claimed in claim 40, wherein:

image resolution information is applied as the
image thumbnail information.

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42. The image compressing apparatus as
15 claimed in claim 41, wherein:

image decomposition level information is
applied as the image resolution information.

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43. The image compressing apparatus as
claimed in claim 40, wherein:

image position information is applied as the
25 image thumbnail information.

44. The image compressing apparatus as
claimed in claim 43, wherein:

one or some of tile information, precinct
information, code block information, and pixel position
5 information is applied as the image position information.

10 45. The image compressing apparatus as
claimed in claim 40, wherein:

image component information is applied as the
image thumbnail information.

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46. The image compressing apparatus as
claimed in claim 40, wherein:

20 image quality information is applied as the
thumbnail information.

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47. The image compressing apparatus as
claimed in claim 46, wherein;

layer information and/or bit plane information
is applied as the image quality information.

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48. The image compressing apparatus as
10 claimed in claim 40, wherein:

image subband information is applied as the
thumbnail information.

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49. An image processing apparatus extracting
an image thumbnail, comprising:

a part extracting a part of compressed code
20 data produced by the image compressing apparatus claimed
in claim 40, based on the thumbnail information.

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50. An image decompressing apparatus
outputting an image thumbnail, comprising:

a part decompressing only a relevant thumbnail
part of the compressed code data produced by the image
5 compressing apparatus claimed in claim 40, based on the
thumbnail information.

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51. An image compressing method for producing
compressed code data of an image, comprising:

a step of setting image thumbnail information
in one or a plurality of forms; and

15 a step of adding the thumbnail information in
the thus-set forms at a head portion of the code data
during forming of the code data.

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52. The image compressing method as claimed
in claim 51, wherein:

image resolution information is applied as the
25 image thumbnail information.

53. The image compressing method as claimed
in claim 52, wherein:

image decomposition level information is
applied as the image resolution information.

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54. The image compressing method as claimed
10 in claim 51, wherein:

image position information is applied as the
image thumbnail information.

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55. The image compressing method as claimed
in claim 54, wherein:

one or some of tile information, precinct
20 information, code block information, and pixel position
information is applied as the image position information.

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56. The image compressing method as claimed
in claim 51, wherein:

image component information is applied as the
image thumbnail information.

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57. The image compressing method as claimed
10 in claim 51, wherein:

image quality information is applied as the
thumbnail information.

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58. The image compressing method as claimed
in claim 57, wherein;

layer information and/or bit plane information
20 is applied as the image quality information.

25 59. The image compressing method as claimed

in claim 51, wherein:

image subband information is applied as the
thumbnail information.

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60. An image processing method for extracting
an image thumbnail, comprising:

10 a step of extracting a part of the compressed
code data produced in the image compressing method
claimed in claim 51, based on the thumbnail information.

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61. An image decompressing method for
outputting an image thumbnail, comprising:

20 a step of decompressing only a relevant
thumbnail part of the compressed code data produced in
the image compressing method claimed in claim 51, based
on the thumbnail information.

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62. A program for causing a computer to
function as the image compressing apparatus claimed in
claim 40.

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63. A program for causing a computer to
function as the image processing apparatus claimed in
10 claim 49.

15 64. A program for causing a computer to
function as the image decompressing apparatus claimed in
claim 50.

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65. A program for causing a computer to
execute the image compressing method claimed in claim 51.

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66. A program for causing a computer to
execute the image processing method claimed in claim 60.

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67. A program for causing a computer to
execute the image decompressing method claimed in claim
61.

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68. A computer-readable recording medium for
15 recording therein the program claimed in claim 62.

20 69. A computer-readable recording medium for
recording therein the program claimed in claim 63.

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70. A computer-readable recording medium for recording therein the program claimed in claim 64.

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71. A computer-readable recording medium for recording therein the program claimed in claim 65.

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72. A computer-readable recording medium for recording therein the program claimed in claim 66.

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73. A computer-readable recording medium for recording therein the program claimed in claim 67.

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74. An information processing apparatus

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producing compressed code data of an image, comprising:

an image inputting part inputting an image to
be compressed;

an image compressing part compressing the
5 thus-input image; and

a storage location adding part adding, to the
thus-compressed image, information concerning a location
storing the image to be compressed.

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75. An information processing apparatus

producing compressed code data of an image, comprising:

15 an image inputting part inputting an image to
be compressed;

an image compressing part compressing the
thus-input image;

a first storage location adding part adding,
20 to the thus-compressed image, information concerning a
location storing the image to be compressed;

a compressed image outputting part outputting
the compressed image;

a second storage location adding part adding,
25 to the image to be compressed, information concerning an

output destination storing the compressed image to which
the compressed image is output; and

an image to be compressed outputting part
outputting the image to be compressed having the
5 information added thereto by the second storage location
adding part, to an inputting source from which said
image inputting part initially inputs the image to be
compressed.

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76. An information processing apparatus
producing compressed code data of an image, comprising:

15 an image inputting part inputting an image to
be compressed;

an image compressing part compressing the
thus-input image;

a compressed image outputting part outputting
20 the compressed image;

a storage location adding part adding, to the
image to be compressed, information concerning an output
destination storing the compressed image to which the
compressed image is output; and

25 an image to be compressed outputting part

outputting the image to be compressed having the
information added thereto by said storage location
adding part, to an inputting source from which said
image inputting part initially inputs the image to be
5 compressed.

10 77. An information processing apparatus
producing compressed code data of an image, comprising:
an image inputting part inputting an image to
be compressed;
an image compressing part compressing the
15 thus-input image into a plurality of compressed images;
and
a storage location adding part adding, to the
thus-obtained plurality of compressed images,
information concerning a location storing the image to
20 be compressed.

a storage location adding part adding, to the
thus-obtained plurality of compressed images,
information concerning a location storing the image to
20 be compressed.

25 78. An information processing apparatus

producing compressed code data of an image, comprising:

an image inputting part inputting an image to be compressed;

an image compressing part compressing the
5 thus-input image into a plurality of compressed images;

a first storage location adding part adding, to the thus-obtained plurality of compressed images, information concerning a location storing the image to be compressed;

10 a compressed image outputting part outputting the compressed images;

a second storage location adding part adding, to the image to be compressed, information concerning output destinations storing the respective ones of the
15 plurality of compressed images to which the compressed images are output; and

an image to be compressed outputting part outputting the image to be compressed having the information added thereto by the second storage location
20 adding part, to an inputting source from which said image inputting part initially inputs the image to be compressed.

79. An information processing apparatus
producing compressed code data of an image, comprising:

an image inputting part inputting an image to
be compressed;

5 an image compressing part compressing the
thus-input image into a plurality of compressed images;

a compressed image outputting part outputting
the thus-obtained plurality of compressed images;

a storage location adding part adding, to the
10 image to be compressed, information concerning output
destinations storing the respective ones of the
plurality of compressed images to which the compressed
images are thus output; and

an image to be compressed outputting part
15 outputting the image to be compressed having the
information added thereto by said storage location
adding part, to an inputting source from which said
image inputting part initially inputs the image to be
compressed.

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80. The information processing apparatus as
25 claimed in claim 77, comprising:

a compressed image outputting part outputting
the respective compressed images; and

a part adding, to a head portion of each of
the plurality of compressed images compressed by said
5 image compressing part, during forming the code data,
information concerning a location storing another
compressed image of the plurality of compressed images.

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81. The information processing apparatus as
claimed in claim 78, comprising:

a compressed image outputting part outputting
15 the respective compressed images; and

a part adding, to a head portion of each of
the plurality of compressed images compressed by said
image compressing part, during forming the code data,
information concerning a location storing another
20 compressed image of the plurality of compressed images.

25

82. The information processing apparatus as

claimed in claim 79, comprising:

a compressed image outputting part outputting
the respective compressed images; and

5 a part adding, to a head portion of each of
the plurality of compressed images compressed by said
image compressing part, during forming the code data,
information concerning a location storing another
compressed image of the plurality of compressed images.

10

83. The information processing apparatus as
claimed in claim 77, comprising:

15 a compressed image outputting part outputting
the respective compressed images;

an image to be compressed outputting part
outputting the image to be compressed to an inputting
source of said image inputting part; and

20 a part adding, to a head portion of the image
to be compressed, during forming the code data thereof,
information concerning output destinations to which the
respective one of the plurality of compressed images are
output.

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84. The information processing apparatus as claimed in claim 78, comprising:

a compressed image outputting part outputting the respective compressed images;

5 an image to be compressed outputting part outputting the image to be compressed to an inputting source of said image inputting part; and

a part adding, to a head portion of the image to be compressed, during forming the code data thereof,
10 information concerning output destinations to which the respective one of the plurality of compressed images are output.

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85. The information processing apparatus as claimed in claim 79, comprising:

a compressed image outputting part outputting
20 the respective compressed images;

an image to be compressed outputting part outputting the image to be compressed to an inputting source of said image inputting part; and

a part adding, to a head portion of the image
25 to be compressed, during forming the code data thereof,

information concerning output destinations to which the respective one of the plurality of compressed images are output.

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86. The information processing apparatus as claimed in claim 74, wherein:

10 the inputting source or the output destination comprises an internet-reachable storage location, and the information concerning the storage location comprises an IP address and/or an URL.

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87. The information processing apparatus as claimed in claim 75, wherein:

20 the inputting source or the output destination comprises an internet-reachable storage location, and the information concerning the storage location comprises an IP address and/or an URL.

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88. The information processing apparatus as claimed in claim 76, wherein:

the inputting source or the output destination comprises an internet-reachable storage location, and
5 the information concerning the storage location comprises an IP address and/or an URL.

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89. The information processing apparatus as claimed in claim 77, wherein:

the inputting source or the output destination comprises an internet-reachable storage location, and
15 the information concerning the storage location comprises an IP address and/or an URL.

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90. The information processing apparatus as claimed in claim 78, wherein:

the inputting source or the output destination comprises an internet-reachable storage location, and
25 the information concerning the storage location

comprises an IP address and/or an URL.

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91. The information processing apparatus as claimed in claim 79, wherein:

the inputting source or the output destination comprises an internet-reachable storage location, and
10 the information concerning the storage location comprises an IP address and/or an URL.

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92. The information processing apparatus as claimed in claim 74, wherein:

the compressed code data is produced based on a method defined by JPEG 2000.

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93. The information processing apparatus as
25 claimed in claim 75, wherein:

the compressed code data is produced based on
a method defined by JPEG 2000.

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94. The information processing apparatus as
claimed in claim 76, wherein:

the compressed code data is produced based on
10 a method defined by JPEG 2000.

15 95. The information processing apparatus as
claimed in claim 77, wherein:

the compressed code data is produced based on
a method defined by JPEG 2000.

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96. The information processing apparatus as
claimed in claim 78, wherein:

25 the compressed code data is produced based on

a method defined by JPEG 2000.

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97. The information processing apparatus as claimed in claim 79, wherein:

the compressed code data is produced based on a method defined by JPEG 2000.

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98. An information processing method for producing compressed code data of an image, comprising:

an image inputting step of inputting an image to be compressed;

an image compressing step of compressing the thus-input image; and

20 a storage location adding step of adding, to the thus-compressed image, information concerning a location storing the image to be compressed.

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99. An information processing method for
producing compressed code data of an image, comprising:
an image inputting step of inputting an image
to be compressed;

5 an image compressing step of compressing the
thus-input image;

a first storage location adding step of adding,
to the thus-compressed image, information concerning a
location storing the image to be compressed;

10 a compressed image outputting step of
outputting the compressed image;

a second storage location adding step of
adding, to the image to be compressed, information
concerning an output destination storing the compressed
15 image to which the compressed image is output; and

an image to be compressed outputting step of
outputting the image to be compressed having the
information added thereto in the second storage location
adding step, to an inputting source from which the image
20 to be compressed is initially input in said image
inputting step.

100. An information processing method for producing compressed code data of an image, comprising:

an image inputting step of inputting an image to be compressed;

5 an image compressing step of compressing the thus-input image;

a compressed image outputting step of outputting the compressed image;

a storage location adding step of adding, to
10 the image to be compressed, information concerning an output destination storing the compressed image to which the compressed image is thus output; and

a image to be compressed outputting step of outputting the image to be compressed having the
15 information added thereto in said storage location adding step, to an inputting source from which the image to be compressed is initially input in said image inputting step.

20

101. An information processing method for producing compressed code data of an image, comprising:

25 an image inputting step of inputting an image

to be compressed;

an image compressing step of compressing the
thus-input image into a plurality of compressed images;
and

5 a storage location adding step of adding, to
the thus-obtained plurality of compressed images,
information concerning a location storing the image to
be compressed.

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102. An information processing method for
producing compressed code data of an image, comprising:

15 an image inputting step of inputting an image
to be compressed;

an image compressing step of compressing the
thus-input image into a plurality of compressed images;

a first storage location adding step of adding,
20 to the thus-obtained plurality of compressed images,
information concerning a location storing the image to
be compressed;

a compressed image outputting step of
outputting the compressed images;

25 a second storage location adding step of

adding, to the image to be compressed, information concerning output destinations storing the respective ones of the plurality of compressed images to which the compressed images are output; and

5 an image to be compressed outputting step of outputting the image to be compressed having the information added thereto in the second storage location adding step, to an inputting source from which the image to be compressed is initially input in said image
10 inputting step.

15 103. An information processing method for producing compressed code data of an image, comprising:
 an image inputting step of inputting an image to be compressed;
 an image compressing step of compressing the
20 thus-input image into a plurality of compressed images;
 a compressed image outputting step of outputting the thus-obtained plurality of compressed images;
 a storage location adding step of adding, to
25 the image to be compressed, information concerning

output destinations storing the respective ones of the plurality of compressed images to which the compressed images are output; and

an image to be compressed outputting step of
5 outputting the image to be compressed having the information added thereto in said storage location adding step, to an inputting source from which the image to be compressed is initially input in said image inputting part.

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104. The information processing method as
15 claimed in claim 101, comprising:

a compressed image outputting step of
outputting the respective compressed images; and

a step of adding, to a head portion of each of
the plurality of compressed images compressed in said
20 image compressing step, during forming the code data,
information concerning a location storing another
compressed image of the plurality of compressed images.

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105. The information processing method as claimed in claim 102, comprising:

a compressed image outputting step of outputting the respective compressed images; and

5 a step of adding, to a head portion of each of the plurality of compressed images compressed in said image compressing step, during forming the code data, information concerning a location storing another compressed image of the plurality of compressed images.

10

106. The information processing method as claimed in claim 103, comprising:

a compressed image outputting step of outputting the respective compressed images; and

a step of adding, to a head portion of each of the plurality of compressed images compressed in said image compressing step, during forming the code data, information concerning a location storing another compressed image of the plurality of compressed images.

25

107. The information processing method as claimed in claim 101, comprising:

a compressed image outputting step of outputting the respective compressed images;

5 an image to be compressed outputting step of outputting the image to be compressed to an inputting source in said image inputting step; and

a step of adding, to a head portion of the image to be compressed, during forming the code data
10 thereof, information concerning output destinations to which the respective one of the plurality of compressed images are output.

15

108. The information processing method as claimed in claim 102, comprising:

a compressed image outputting step of
20 outputting the respective compressed images;

an image to be compressed outputting step of outputting the image to be compressed to an inputting source in said image inputting step; and

a step of adding, to a head portion of the
25 image to be compressed, during forming the code data

thereof, information concerning output destinations to which the respective one of the plurality of compressed images are output.

5

109. The information processing method as claimed in claim 103, comprising:

10 a compressed image outputting step of outputting the respective compressed images;

an image to be compressed outputting step of outputting the image to be compressed to an inputting source in said image inputting step; and

15 a step of adding, to a head portion of the image to be compressed, during forming the code data thereof, information concerning output destinations to which the respective one of the plurality of compressed images are output.

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110. The information processing method as
25 claimed in claim 98, wherein:

the inputting source or the outputting destination comprises an internet-reachable storage location, and the information concerning the storage location comprises an IP address and/or an URL.

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111. The information processing method as
10 claimed in claim 99, wherein:

the inputting source or the outputting destination comprises an internet-reachable storage location, and the information concerning the storage location comprises an IP address and/or an URL.

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112. The information processing method as
20 claimed in claim 100, wherein:

the inputting source or the outputting destination comprises an internet-reachable storage location, and the information concerning the storage location comprises an IP address and/or an URL.

25

113. The information processing method as claimed in claim 101, wherein:

the inputting source or the outputting destination comprises an internet-reachable storage location, and the information concerning the storage location comprises an IP address and/or an URL.

10

114. The information processing method as claimed in claim 102, wherein:

the inputting source or the outputting destination comprises an internet-reachable storage location, and the information concerning the storage location comprises an IP address and/or an URL.

20

115. The information processing method as claimed in claim 103, wherein:

the inputting source or the outputting destination comprises an internet-reachable storage location, and the information concerning the storage

location comprises an IP address and/or an URL.

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116. The information processing method as
claimed in claim 98, wherein:

the compressed code data is produced based on
a method defined by JPEG 2000.

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117. The information processing method as
15 claimed in claim 99, wherein:

the compressed code data is produced based on
a method defined by JPEG 2000.

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118. The information processing method as
claimed in claim 100, wherein:

the compressed code data is produced based on
25 a method defined by JPEG 2000.

119. The information processing method as
claimed in claim 101, wherein:

the compressed code data is produced based on
a method defined by JPEG 2000.

5

120. The information processing method as
10 claimed in claim 102, wherein:

the compressed code data is produced based on
a method defined by JPEG 2000.

15

121. The information processing method as
claimed in claim 103, wherein:

the compressed code data is produced based on
20 a method defined by JPEG 2000.

25

122. A program for causing a computer to

function as the information processing apparatus claimed
in claim 74.

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123. A program for causing a computer to
function as the information processing apparatus claimed
in claim 75.

10

124. A program for causing a computer to
15 function as the information processing apparatus claimed
in claim 76.

20

125. A program for causing a computer to
function as the information processing apparatus claimed
in claim 77.

25

126. A program for causing a computer to
function as the information processing apparatus claimed
in claim 78.

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127. A program for causing a computer to
function as the information processing apparatus claimed
10 in claim 79.

128. A program for causing a computer to
execute the information processing method claimed in
claim 98.

20

129. A program for causing a computer to
execute the information processing method claimed in
claim 99.

25

130. A program for causing a computer to execute the information processing method claimed in claim 100.

5

131. A program for causing a computer to execute the information processing method claimed in
10 claim 101.

15 132. A program for causing a computer to execute the information processing method claimed in claim 102.

20

133. A program for causing a computer to execute the information processing method claimed in claim 103.

25

134. A compute-readable recording medium for
recording therein the program claimed in claim 122.

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135. A compute-readable recording medium for
recording therein the program claimed in claim 123.

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136. A compute-readable recording medium for
recording therein the program claimed in claim 124.

15

137. A compute-readable recording medium for
20 recording therein the program claimed in claim 125.

25

138. A compute-readable recording medium for

recording therein the program claimed in claim 126.

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139. A compute-readable recording medium for
recording therein the program claimed in claim 127.

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140. A compute-readable recording medium for
recording therein the program claimed in claim 128.

15

141. A compute-readable recording medium for
recording therein the program claimed in claim 129.

20

142. A compute-readable recording medium for
25 recording therein the program claimed in claim 130.

143. A compute-readable recording medium for recording therein the program claimed in claim 131.

5

144. A compute-readable recording medium for recording therein the program claimed in claim 132.

10

145. A compute-readable recording medium for recording therein the program claimed in claim 133.

15

146. An information processing apparatus
20 comprising:
an extracting part extracting desired code
data from image code data; and
an extracted code data with concern
information generating part adding information
25 concerning the extraction to the thus-extracted code

data so as to generate an extracted code data with the concern information.

5

147. An information processing apparatus comprising:

an extracting part extracting desired code
10 data from image code data; and
an image code data with concern information
generating part adding information concerning the
extraction to the original image code data so as to
generate an image code data with the concern information.

15

148. An information processing apparatus
20 comprising:

an extracting part extracting desired code
data from image code data; and
a relation information holding and managing
part holding and managing information indicating a
25 relation between information concerning the extraction

and the thus-extracted code data.

5

149. The information processing apparatus as claimed in claim 146, further comprising:

a transfer request receiving part receiving a transfer request externally, and

10

wherein:

said extracting part extracts the desired code data from the original code data in response to a reception of a transfer request in said transfer request receiving part.

15

150. The information processing apparatus as claimed in claim 147, further comprising:

20 a transfer request receiving part receiving a transfer request externally, and

wherein:

said extracting part extracts the desired code
25 data from the original code data in response to a

reception of the transfer request in said transfer
request receiving part.

5

151. The information processing apparatus as
claimed in claim 148, further comprising:

a transfer request receiving part receiving a
10 transfer request externally, and

wherein:

said extracting part extracts the desired code
data from the original code data in response to a
reception of the transfer request in said transfer
15 request receiving part.

20 152. The information processing apparatus as
claimed in claim 149, wherein:

said extracted code data with concern
information generating part adds, in addition to the
information concerning the extraction, information
25 concerning the relevant transfer request to the

extracted code data so as to generate the extracted code data with the concern information.

5

153. The information processing apparatus as claimed in claim 150, wherein:

10 said image code data with concern information
generating part adds, in addition to the information concerning the extraction, information concerning the relevant transfer request to the image code data so as to generate the image code data with the concern information.

15

154. The information processing apparatus as claimed in claim 151, wherein:

20 said relation information holding and managing part holds and manages information indicating relation between information concerning the relevant transfer request as well as the information concerning the
25 extraction and the extracted information.

155. The information processing apparatus as claimed in claim 146, further comprising:

a transfer part transferring the extracted code data with the concern information, and

5 wherein:

said transfer part comprises a setting part for setting a transfer destination.

10

156. The information processing apparatus as claimed in claim 147, further comprising:

15 a transfer part transferring the extracted code data with the concern information, and

wherein:

said transfer part comprises a setting part for setting a transfer destination.

20

157. The information processing apparatus as claimed in claim 148, further comprising:

25 a transfer part transferring the extracted

code data with concern information, and

wherein:

said transfer part comprises a setting part
for setting a transfer destination.

5

158. The information processing apparatus as
10 claimed in claim 155, wherein:

said extracted code data with concern
information generating part adds, in addition to the
information concerning the extraction, information
concerning the relevant transfer destination to the
15 extracted code data so as to generate the extracted code
data with the concern information.

20

159. The information processing apparatus as
claimed in claim 156, wherein:

said image code data with concern information
generating part adds, in addition to the information
25 concerning the extraction, information concerning the

relevant transfer destination to the image code data so as to generate the image code data with the concern information.

5

160. The information processing apparatus as claimed in claim 157, wherein:

10 said relation information holding and managing part holds and manages information concerning the relevant transfer destination as well as the information concerning the extraction and the extracted information.

15

161. The information processing apparatus as claimed in claim 146, wherein:

20 the information concerning the extraction to be added to the extracted code data by said extracted code data with concern information generating part comprises information concerning the contents of the code data extracted from the original image code data.

25

162. The information processing apparatus as claimed in claim 147, wherein:

5 the information concerning the extraction to be added to the original image code data by said image code data with concern information generating part comprises information concerning the contents of the code data extracted from the original image code data.

10

163. The information processing apparatus as claimed in claim 148, wherein:

15 the information concerning the extraction to be held and managed by said relation information holding and managing part comprises information concerning the contents of the code data extracted from the original image code data.

20

164. The information processing apparatus as claimed in claim 146, wherein:

25 the information concerning the extraction to

be added to the extracted code data by said extracted code data with concern information generating part comprises information concerning the original image code data.

5

165. The information processing apparatus as
10 claimed in claim 147, wherein:

the information concerning the extraction to be added to the original image code data by said image code data with concern information generating part comprises information concerning the original image code
15 data.

20 166. The information processing apparatus as claimed in claim 148, wherein:

the information concerning the extraction to be held and managed by said relation information holding and managing part comprises information concerning the
25 original image code data.

167. The information processing apparatus as claimed in claim 146, wherein:

the information concerning the extraction to be added to the extracted code data by said extracted
5 code data with concern information generating part comprises information concerning the device which possesses the original image code data.

10

168. The information processing apparatus as claimed in claim 147, wherein:

the information concerning the extraction to
15 be added to the original image code data by said image code data with concern information generating part comprises information concerning the device which possesses the original image code data.

20

169. The information processing apparatus as claimed in claim 148, wherein:

25 the information concerning the extraction to

be held and managed by said relation information holding and managing part comprises information concerning the device which possesses the original image code data.

5

170. The information processing apparatus as claimed in claim 146, wherein:

10 the information concerning the extraction to be added to the extracted code data by said extracted code data with concern information generating part comprises information concerning the device which possesses the extracted code data.

15

171. The information processing apparatus as claimed in claim 147, wherein:

20 the information concerning the extraction to be added to the original image code data by said image code data with concern information generating part comprises information concerning the device which
25 possesses the extracted code data.

172. The information processing apparatus as claimed in claim 148, wherein:

the information concerning the extraction to be held and managed by said relation information holding
5 and managing part comprises information concerning the device which possesses the extracted code data.

10

173. An information processing method comprising:

an extracting step of extracting desired code data from image code data; and

15

an extracted code data with concern information generating step of adding information concerning the extraction to the thus-extracted code data so as to generate an extracted code data with the concern information.

20

174. An information processing method
25 comprising:

an extracting step of extracting desired code data from image code data; and

an image code data with concern information generating part adding information concerning the
5 extraction to the original image code data so as to generate an image code data with the concern information.

10

175. An information processing apparatus comprising:

an extracting step of extracting desired code data from image code data; and

15 a relation information holding and managing step of holding and managing information indicating a relation between information concerning the extraction and the thus-extracted code data.

20

176. The information processing method as claimed in claim 173, further comprising:

25 a transfer request receiving step of receiving

a transfer request externally, and

wherein:

said extracting step comprises a step of
extracting the desired code data from the original code
5 data in response to a reception of a transfer request in
said transfer request receiving step.

10

177. The information processing method as
claimed in claim 174, further comprising:

a transfer request receiving step of receiving
a transfer request externally, and

15

wherein:

said extracting step comprises a step of
extracting the desired code data from the original code
data in response to a reception of a transfer request in
said transfer request receiving step.

20

178. The information processing method as
25 claimed in claim 175, further comprising:

a transfer request receiving step of receiving
a transfer request externally, and

wherein:

said extracting step comprising a step of
5 extracting the desired code data from the original code
data in response to a reception of a transfer request in
said transfer request receiving step.

10

179. The information processing method as
claimed in claim 176, wherein:

said extracted code data with concern
15 information generating step comprising a step of adding,
in addition to the information concerning the extraction,
information concerning the relevant transfer request to
the extracted code data so as to generate the extracted
code data with the concern information.

20

180. The information processing method as
25 claimed in claim 177, wherein:

said image code data with concern information
generating step comprises a step of adding, in addition
to the information concerning the extraction,
information concerning the relevant transfer request to
5 the image code data so as to generate the image code
data with the concern information.

10

181. The information processing method as
claimed in claim 178, wherein:

said relation information holding and managing
step comprises a step of holding and managing
15 information concerning the relevant transfer request as
well as the information concerning the extraction and
the extracted information.

20

182. The information processing method as
claimed in claim 173, further comprising:

a transfer step of transferring the extracted
25 code data with concern information, and

wherein:

said transfer step comprises a setting step of
setting a transfer destination.

5

183. The information processing method as
claimed in claim 174, further comprising:

10 a transfer step of transferring the extracted
code data with concern information, and

wherein:

said transfer step comprises a setting step of
setting a transfer destination.

15

184. The information processing method as
20 claimed in claim 175, further comprising:

a transfer step of transferring the extracted
code data with concern information, and

wherein:

said transfer step comprises a setting step of
25 for setting a transfer destination.

185. The information processing method as claimed in claim 182, wherein:

said extracted code data with concern
information generating step comprising a step of adding,
5 in addition to the information concerning the extraction,
information concerning the relevant transfer destination
to the extracted code data so as to generate the
extracted code data with the concern information.

10

186. The information processing method as claimed in claim 183, wherein:

15 said image code data with concern information
generating step comprises a step of adding, in addition
to the information concerning the extraction,
information concerning the relevant transfer destination
to the image code data so as to generate the image code
20 data with the concern information.

25 187. The information processing method as

claimed in claim 184, wherein:

said relation information holding and managing
step comprising a step of holding and managing
information concerning the relevant transfer destination
5 as well as the information concerning the extraction and
the extracted information.

10

188. The information processing method as
claimed in claim 173, wherein:

the information concerning the extraction to
be added to the extracted code data in said extracted
15 code data with concern information generating step
comprises information concerning the contents of the
code data extracted from the original image code data.

20

189. The information processing method as
claimed in claim 174 wherein:

the information concerning the extraction to
25 be added to the original image code data in said image

code data with concern information generating step
comprises information concerning the contents of the
code data extracted from the original image code data.

5

190. The information processing method as
claimed in claim 175, wherein:

10 the information concerning the extraction to
be held and managed in said relation information holding
and managing step comprises information concerning the
contents of the code data extracted from the original
image code data.

15

191. The information processing method as
20 claimed in claim 173, wherein:

 the information concerning the extraction to
be added to the extracted code data in said the
extracted code data with concern information generating
step comprises information concerning the original image
25 code data.

192. The information processing method as claimed in claim 174, wherein:

the information concerning the extraction to be added to the original image code data in said image
5 code data with concern information generating step comprises information concerning the original image code data.

10

193. The information processing method as claimed in claim 175, wherein:

the information concerning the extraction to
15 be held and managed in said relation information holding and managing step comprises information concerning the original image code data.

20

194. The information processing method as claimed in claim 173, wherein:

the information concerning the extraction to
25 be added to the extracted code data in said extracted

code data with concern information generating step
comprises information concerning the device which
possesses the original image code data.

5

195. The information processing method as
claimed in claim 174, wherein:

10 the information concerning the extraction to
be added to the original image code data in said the
image code data with concern information generating step
comprises information concerning the device which
possesses the original image code data.

15

196. The information processing method as
20 claimed in claim 175, wherein:

 the information concerning the extraction to
be held and managed in said relation information holding
and managing step comprises information concerning the
device which possesses the original image code data.

25

197. The information processing method as claimed in claim 173, wherein:

the information concerning the extraction to be added to the extracted code data in said extracted
5 code data with concern information generating step comprises information concerning the device which possesses the extracted code data.

10

198. The information processing method as claimed in claim 174, wherein:

the information concerning the extraction to
15 be added to the original image code data in said original code data with concern information generating step comprises information concerning the device which possesses the extracted code data.

20

199. The information processing method as claimed in claim 175, wherein:

25 the information concerning the extraction to

be held and managed in said relation information holding
and managing step comprises information concerning the
device which possesses the extracted code data.

5

200. A program for causing a computer to
execute the information processing method claimed in
10 claim 173.

15 201. A program for causing a computer to
execute the information processing method claimed in
claim 174.

20

202. A program for causing a computer to
execute the information processing method claimed in
claim 175.

25

203. A computer-readable recording medium for recording therein the program claimed in claim 200.

5

204. A computer-readable recording medium for recording therein the program claimed in claim 201.

10

205. A computer-readable recording medium for recording therein the program claimed in claim 202.